

# Health Inequities

## Introduction

We think of health as a product of our genes, lifestyle choices, and medical services, but the social, economic and community environments also have profound impacts on our health.<sup>1</sup> According to University of California, San Francisco professor Paula Braverman, a person's health is not only a product of good medical care and genes; health and the likelihood of becoming sick and dying prematurely are greatly influenced by powerful social factors such as levels of education and income.<sup>1</sup> Income and educational attainment, however, do not fully explain health disparities. Race and ethnicity, while strongly linked to education and income, have their own influence on health outcomes. Race and socioeconomic status (a combined measure of income and educational attainment), independently and jointly, contribute to health inequities in the United States.<sup>1</sup>

The influence of income, education and race/ethnicity on health is evident in Contra Costa, a diverse county with wide variation in these factors across communities. These differences contribute to major health inequities, with residents of low-income and poorly educated communities and African American residents experiencing worse health outcomes and dramatically lower life expectancy. This section illustrates health disparities and inequities based on income, education and race/ethnicity in Contra Costa, and begins to explore the interplay and distribution of these factors in our county.

*Poverty was associated with poorer health status and shorter life expectancy among Contra Costa residents.*

In Contra Costa, greater wealth equated to better health and longer life. Among adults 25 years of age and older, 8.4% of those with household incomes at or above 300% of the federal poverty level (FPL) reported “fair” or “poor” health status compared to almost one-third (29.5%) of those living below 200% of the FPL. Self-reported health as poor, fair, good, very good or excellent is considered a reliable indicator of health status.<sup>1</sup>

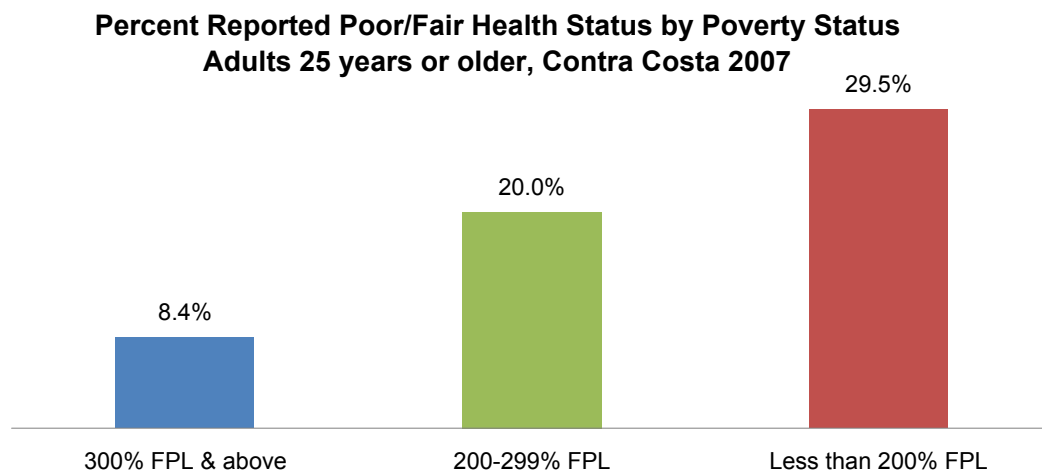


FIGURE 1

A child born in a low-poverty area (all census tracts with less than 10% of households living below 200% of federal poverty level) in 2000 could expect to live more than six years longer than a child born in a high-poverty area (all census tracts with more than 30% of households living below 200% of federal poverty level). Life expectancy in low-poverty areas was 81.4 years and 74.9 years in high-poverty areas.

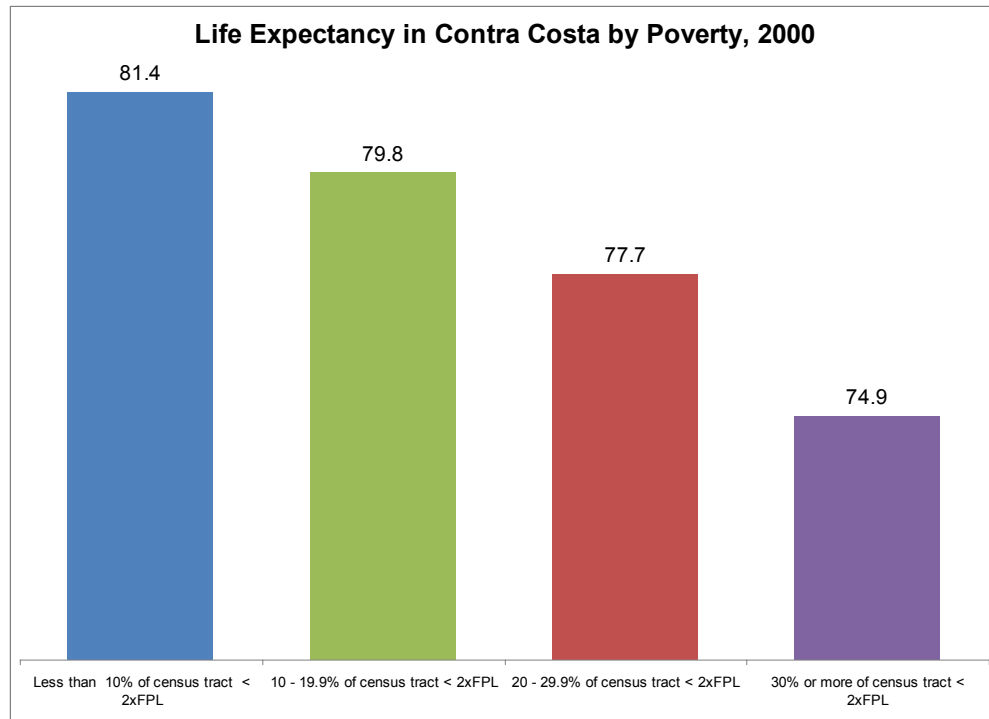


FIGURE 2

Individual poverty and neighborhood poverty have been associated with poorer health outcomes. Poverty limits access to health-promoting resources such as healthy foods, safe recreation areas, and clean air and water.<sup>2</sup> American adults living in poverty experience considerably worse health on average than their more affluent peers. Health differences across income groups are seen in a range of health conditions throughout the life course. American adults in families with incomes below the federal poverty level are more likely to be diagnosed with diabetes or coronary artery disease and be limited in their activity by a chronic disease than those living above the poverty level.<sup>1</sup> Living in high-poverty neighborhoods increases exposure to environmental conditions that threaten health such as crime and air pollution.<sup>2</sup>

*Lower educational attainment was associated with poorer health and shorter life expectancy among Contra Costa residents.*

In Contra Costa, only 5.3% of adults age 25 years and older with at least a master’s degree and 7.8% of those with a bachelor’s degree or some graduate training reported that their health status was “fair” or “poor” compared to 22.6% of residents with a high school diploma or less education.

**Percent Reported Poor/Fair Health by Education  
Adults 25 years or older, Contra Costa 2007**

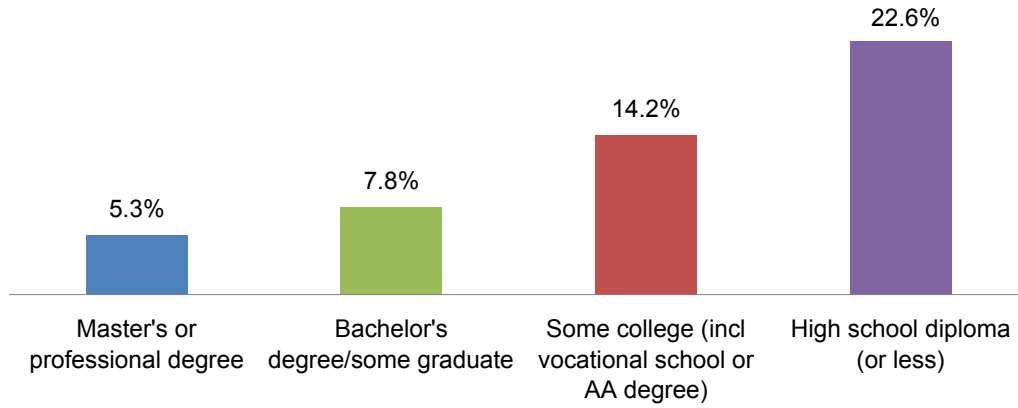


FIGURE 3

A child born in a high-education area in Contra Costa (i.e., all census tracts with less than 5% of residents with less than a high school diploma) in 2000 could expect to live more than seven years longer than a child born in a low-education area (all census tracts with 25% or more residents with less than a high school diploma). Life expectancy in high-education areas in the county was 82.0 years compared to 74.6 years in low-education areas.

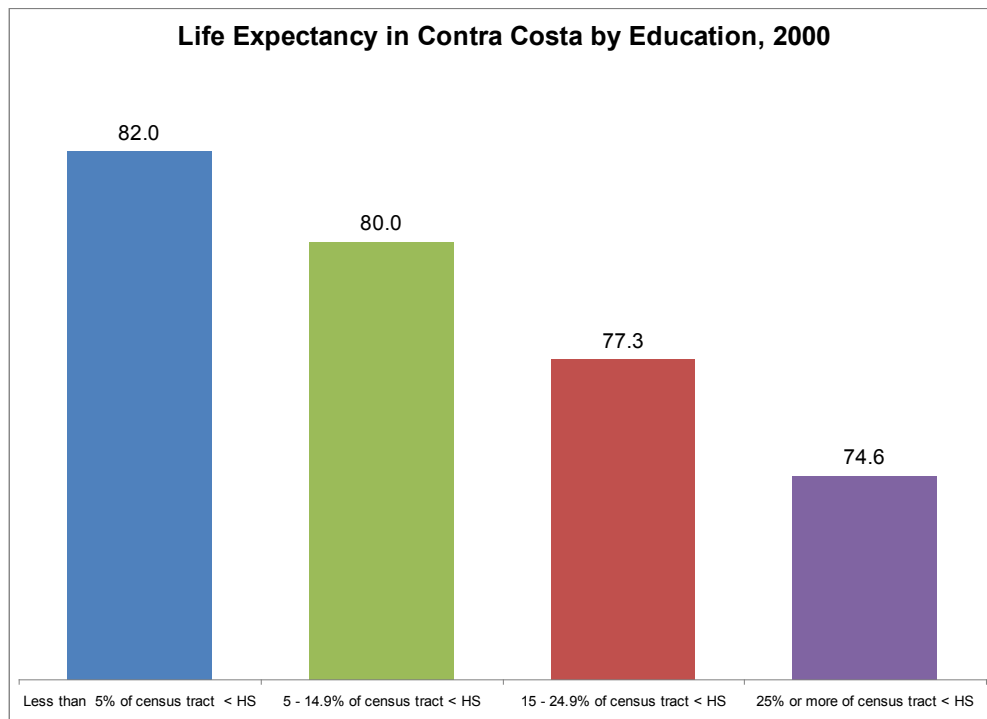


FIGURE 4

People with more education are likely to live longer and experience better health outcomes. A large body of evidence links education with health, even when factors like income are taken into account.<sup>3</sup> Research suggests that higher educational attainment can impact health in a variety of ways. More

education can increase health knowledge and healthy behaviors, such as exercising regularly, refraining from smoking, and obtaining timely health care check-ups and screenings. Highly educated people have better employment opportunities with healthier working conditions and greater likelihood of employer-based health care. Better employment opportunities often result in higher income, which in turn is linked to improved social and psychological factors that affect health and directly to better health as shown in Figures 1 and 2.<sup>3</sup>

*African American residents in Contra Costa had a shorter life expectancy than other county residents.*

African Americans in Contra Costa had a shorter life expectancy (73.1 years) than any other racial/ethnic group in the county. An Asian/Pacific Islander or Hispanic baby born between 2005 and 2007 in Contra Costa could expect to live more than five years longer than a white baby born at the same time and more than 12 years longer than an African American baby born at the same time.

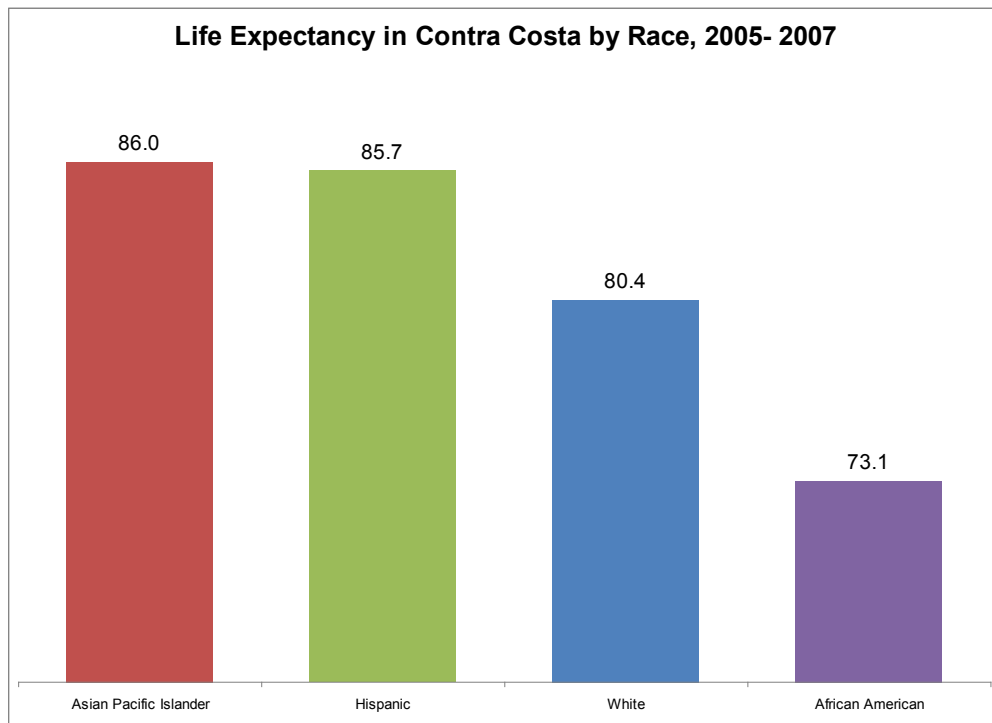


FIGURE 5

On average, African Americans experience disability earlier in life and die sooner than others in the United States. While African Americans are generally poorer, have less education, and are employed in lower status occupations than are European Americans, they have relatively worse health outcomes even at the same level or higher on the socioeconomic ladder. This suggests that there is an added burden of race, independent of its effect on socioeconomic status. Although race affects health largely through its effects on income and education, additional effects beyond socioeconomic disadvantage are present.<sup>4</sup>

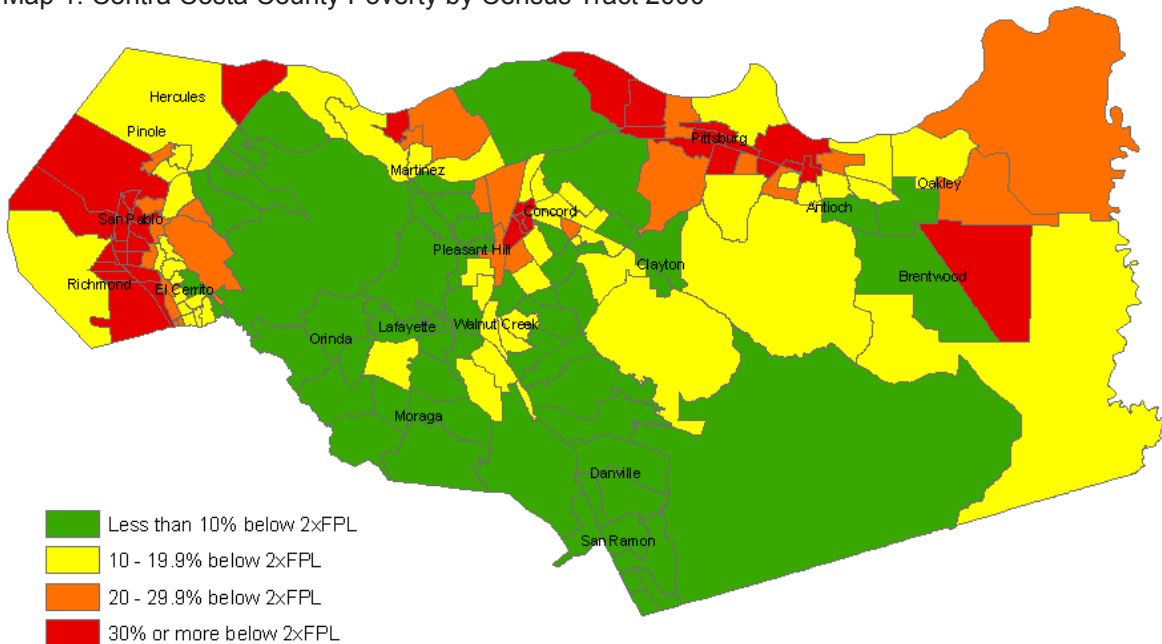
## DISTRIBUTION OF SOCIAL FACTORS: INCOME, EDUCATION & RACE/ETHNICITY

When compared with the state or the nation on income and education, Contra Costa County compares favorably, but looking at the county as a whole masks the vast differences in experience of the county's more than 1 million residents. The median household income in Contra Costa in 2009 was \$75,139 compared to just \$58,931 in California and \$50,221 in the United States. Similarly, Contra Costa had a greater percentage of college graduates (37.6%) than the state (29.9%) or nation (27.9%) in 2009. Within the county, however, distribution of income and education is not uniform and this unequal distribution is echoed in disparities in health outcomes.

*Income level varies widely across the county.*

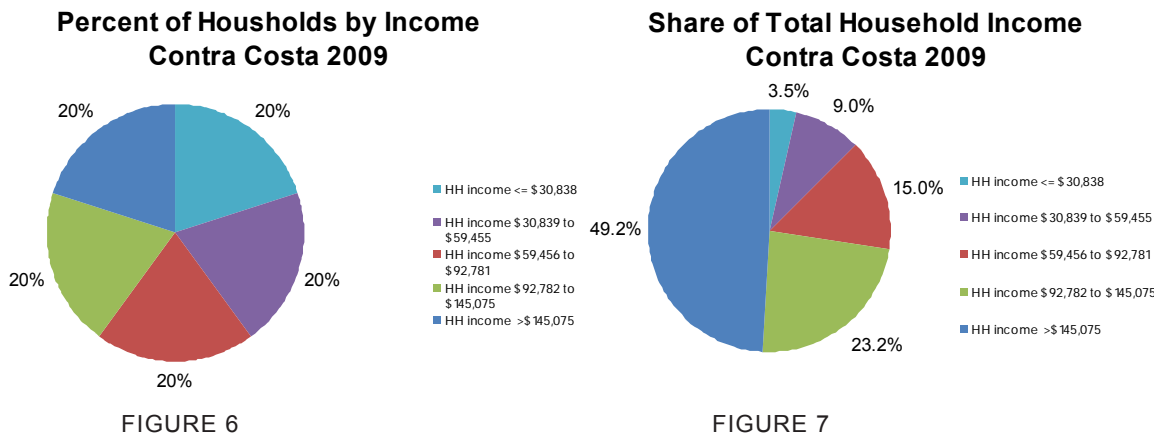
Even within a relatively affluent county like Contra Costa there are pockets of extreme poverty. In 2009, 23.3% of the county's population lived below 200% of the federal poverty threshold. (The average federal poverty threshold for 2009 was \$21,954 for a family of four.) The map below shows the distribution of poverty in the county by census tract in 2000, with red indicating high rates of poverty and green denoting the more affluent areas.

Map 1. Contra Costa County Poverty by Census Tract 2000



The share of total income among households in the county is a key measure of income inequality. If Contra Costa households were divided into quintiles by income in 2009, the lowest quintile (20% of all households) made less than \$30,839. The second made between \$30,839 and \$59,455; the third between \$59,456 and \$92,781; the fourth between \$92,782 and \$145,075; and the highest made more than \$145,075.

In 2009, the poorest 20% of Contra Costa households based on income (i.e., those with less than \$30,839 in household income) earned only 3.5% of total household income in Contra Costa. The wealthiest 20% of households (those with incomes of more than \$145,075) earned almost half of all income in the county (49.2%); this group earned approximately 14 times the income of the poorest group. Figure 7 shows the percentage of total household income earned by each quintile of the county population. Although the difference is most extreme between the poorest and wealthiest households, even the 20% of households with \$59,456 to \$92,781 in income got less than 20% of total household income in the county.



*Many households in Contra Costa did not earn enough to achieve self-sufficiency.*

Although differences in earnings and poverty provide some information about financial disparities in Contra Costa, they do not fully illustrate the number of households that struggle to survive financially.

The federal poverty standards, which were developed in the 1960s, are based solely on food costs and assume that a family's budget is three times its food costs.<sup>5</sup> The Self-Sufficiency Standard was developed to provide a more accurate, nuanced and up-to-date measure of the income required to survive financially. It is based on family size and composition and measures how much income is needed for different family types living in a particular county to adequately meet minimal, basic needs including housing, food, child care, out-of-pocket medical expenses, transportation and other necessary spending. The standard is a very conservative budget and includes nothing for restaurant food, savings, emergency funds, or credit card or loan payments.<sup>5</sup>

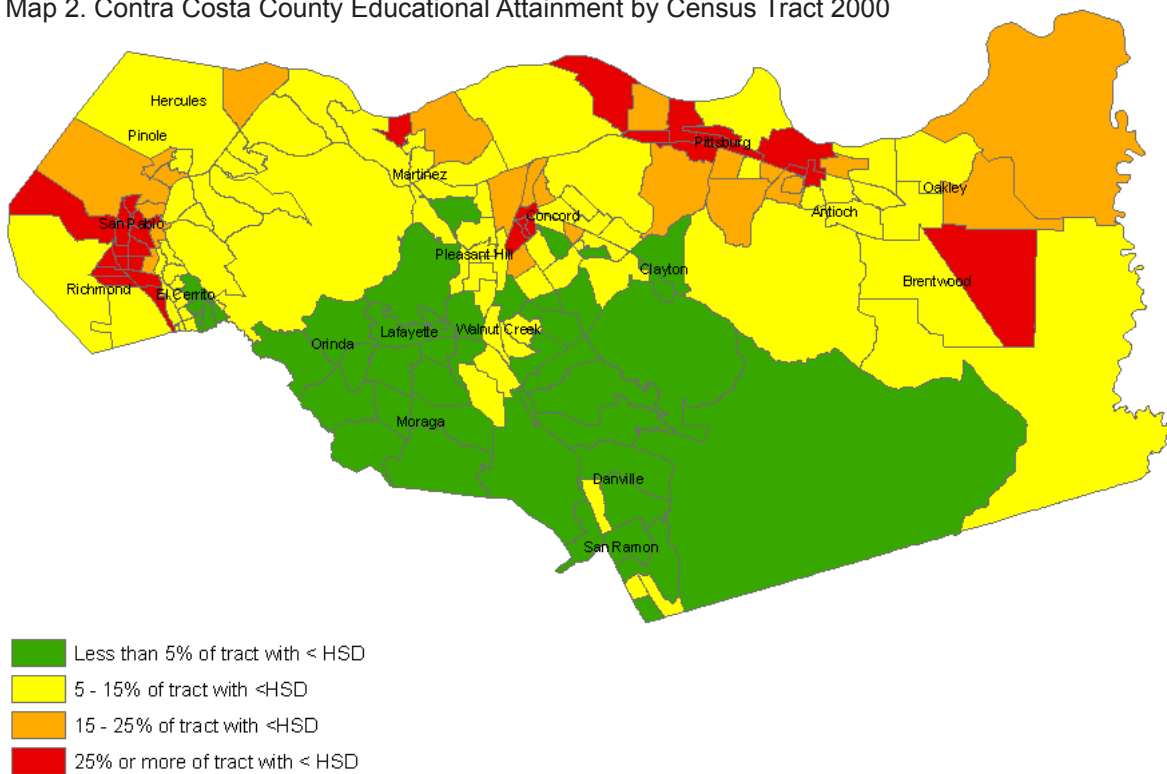
In 2008, the poorest 20% of households in Contra Costa (i.e., those earning less than \$31,610) did not have enough income to achieve self-sufficiency for even a family of two. The 2008 Self-Sufficiency Standard for a family of two ranged from \$32,687 for two adults to \$44,272 for one adult and a preschool-aged child. Since the Self-Sufficiency Standard was as high as \$58,872 for a family of three and up to \$87,760 for a family of four, even households with higher incomes may not have met the Self-Sufficiency Standard.

*Education likewise varies widely across the county.*

In 2009, more than half of Contra Costa adults age 25 years and older had completed at least some college and more than one-third had a bachelor's or more advanced degrees: some college, including those with an associate's degree (30.0%), bachelor's degree (24.5%), master's or professional degree (13.1%). Only 11.8% of county residents had less than a high school diploma.

However, in some census tracts throughout the county more than 25% of the adult population has less than a high school diploma. Map 2 shows the distribution of educational attainment by census tract in 2000, with red indicating areas with a high concentration of low-education adults (i.e., 25% or more residents with less than a high school diploma) and green denoting a low concentration of low-education adults (i.e., less than 5% of residents with less than a high school diploma).

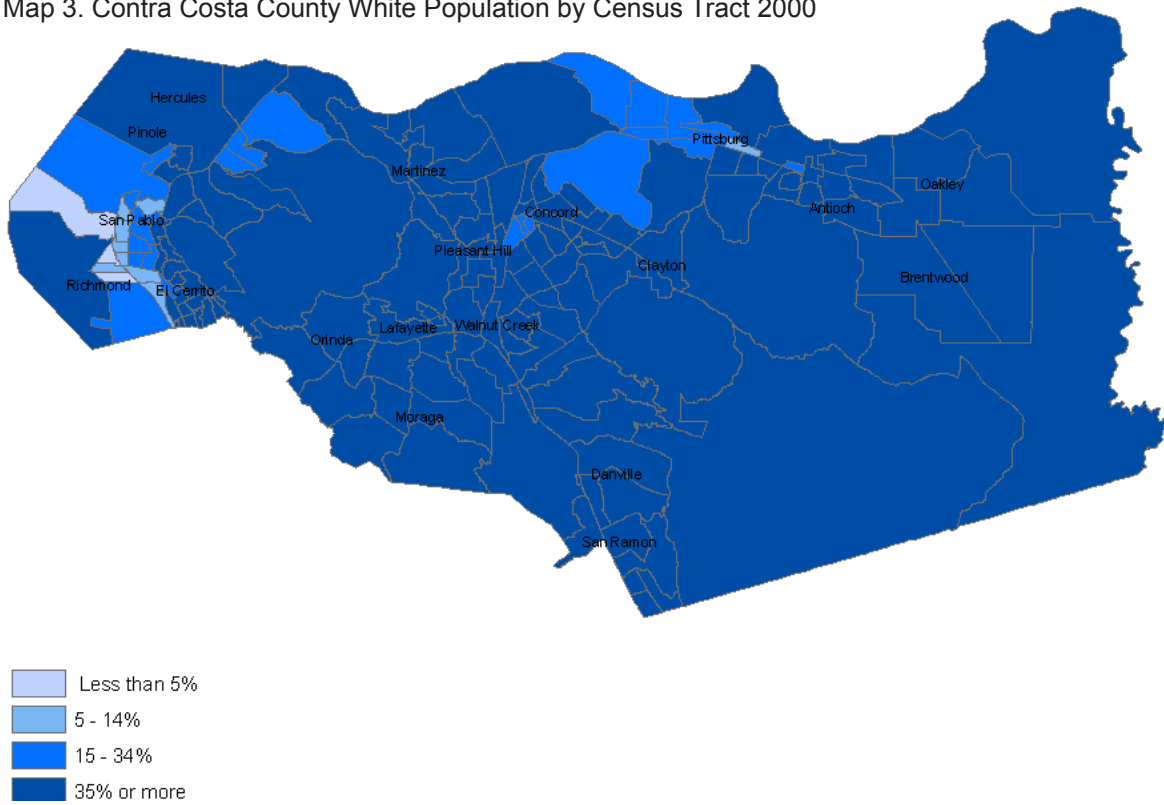
Map 2. Contra Costa County Educational Attainment by Census Tract 2000



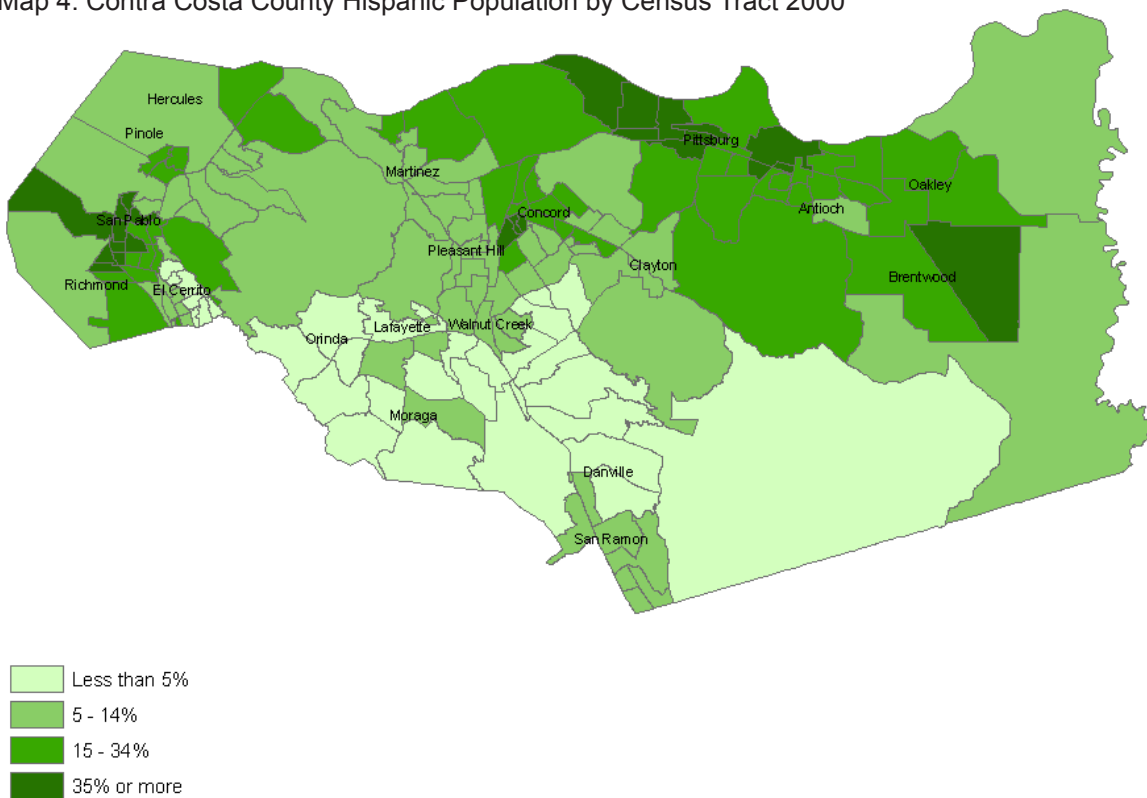
*Racial/ethnic groups are widely but unevenly distributed throughout the county.*

Contra Costa is a racially and ethnically diverse county. In 2009, whites made up 49.7% of the county, followed by Hispanics (23.2%), Asians/Pacific Islanders (14.2%) and African Americans (9.0%). The distribution of different racial/ethnic groups, however, was not uniform across the county. Certain racial and ethnic groups are concentrated in certain areas.

Map 3. Contra Costa County White Population by Census Tract 2000

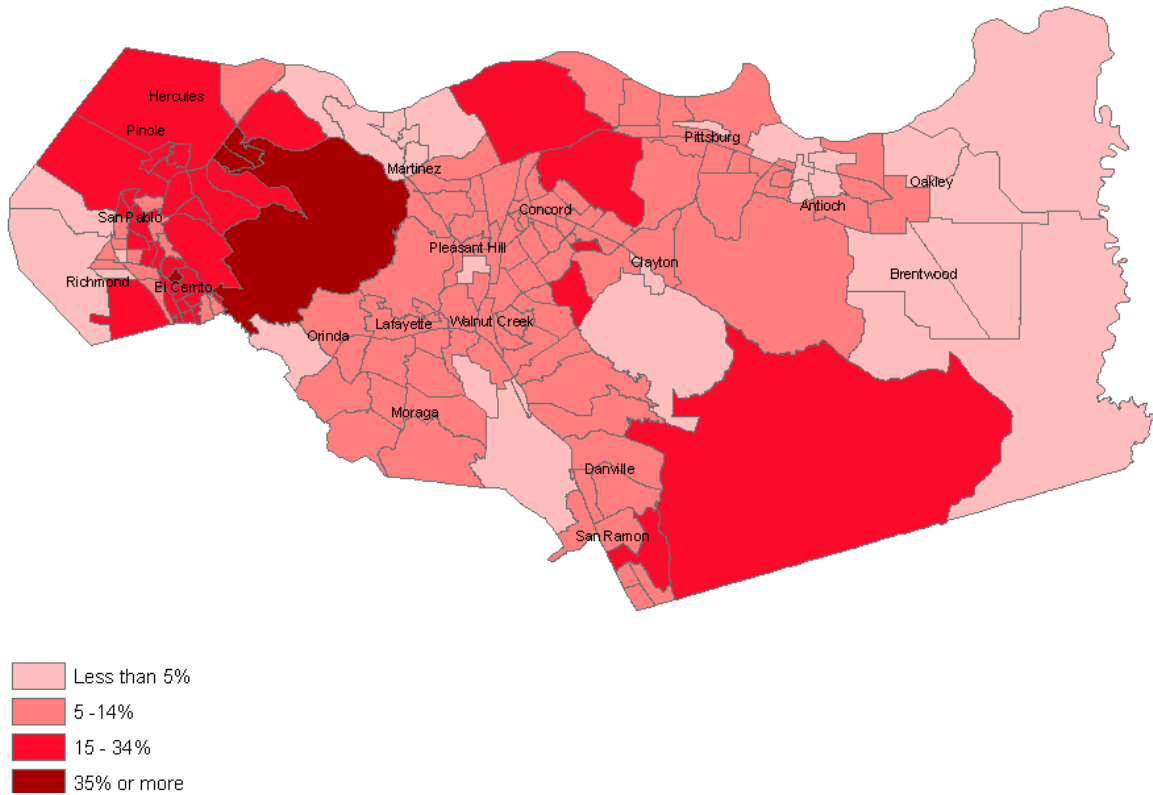


Map 4. Contra Costa County Hispanic Population by Census Tract 2000

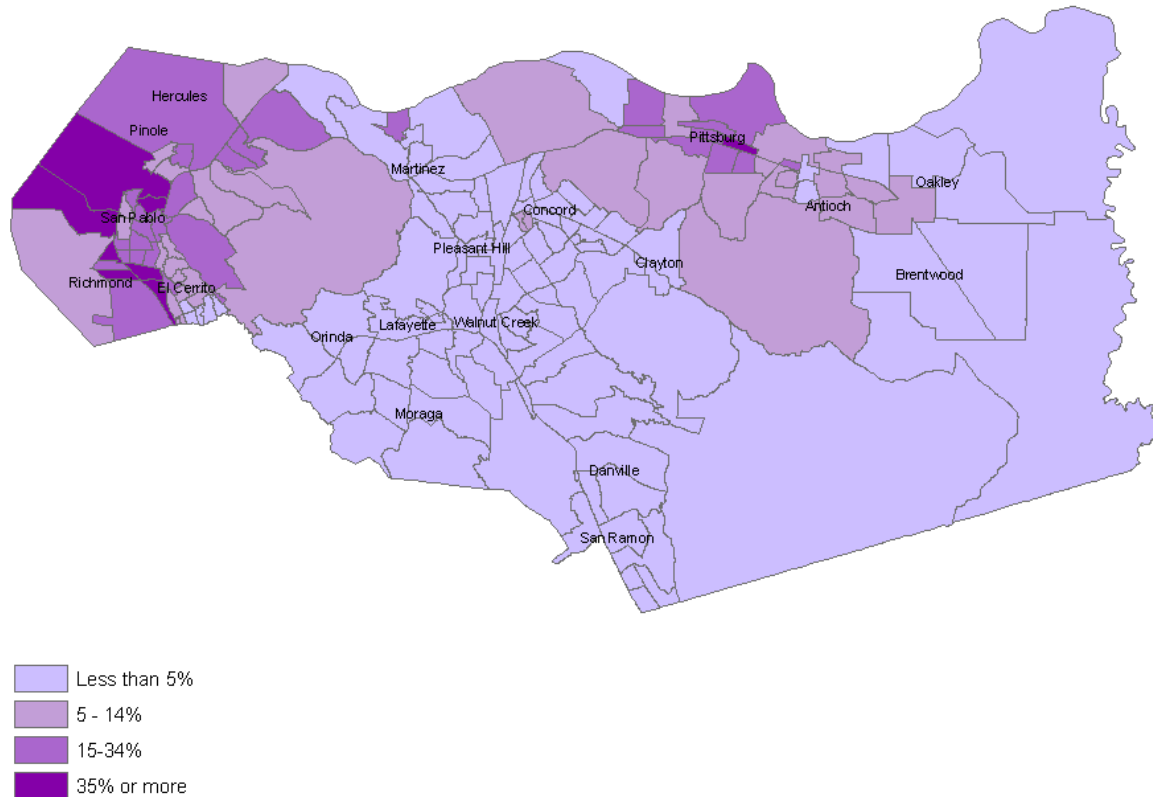




Map 5. Contra Costa Asian/Pacific Islander Population by Census Tract 2000



Map 6. Contra Costa County African American Population by Census Tract 2000



## RELATIONSHIP BETWEEN SOCIAL FACTORS

*Low educational attainment is associated with greater poverty and lower earnings.*

Contra Costa residents with more education were less likely to live below the federal poverty level and earned more than less-educated residents. In 2009, almost 17% of residents with less than a high school diploma lived below poverty compared to only 3.1% of those with a bachelor's degree or higher education. The percent of county residents living below the federal poverty level was lower with each increase in educational attainment. County residents with higher educational attainment also earned more than less-educated residents during this time. The median earnings for those with less than a high school diploma was \$21,766 compared to \$78,366 for those with a graduate or professional degree. Median earnings increased significantly with each increase in educational attainment.

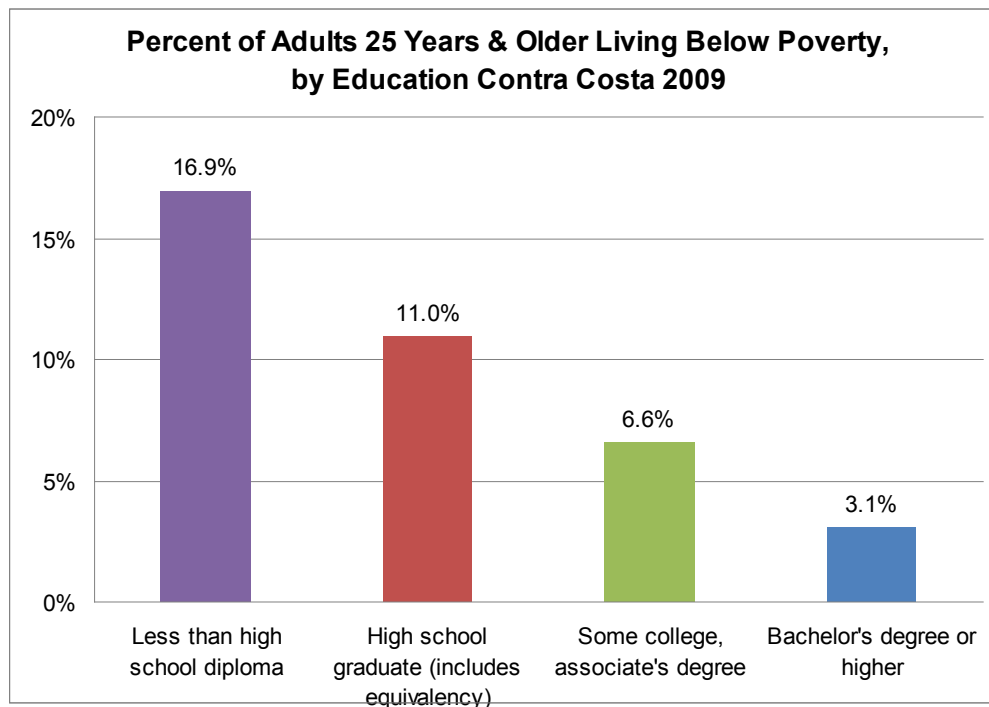


FIGURE 8

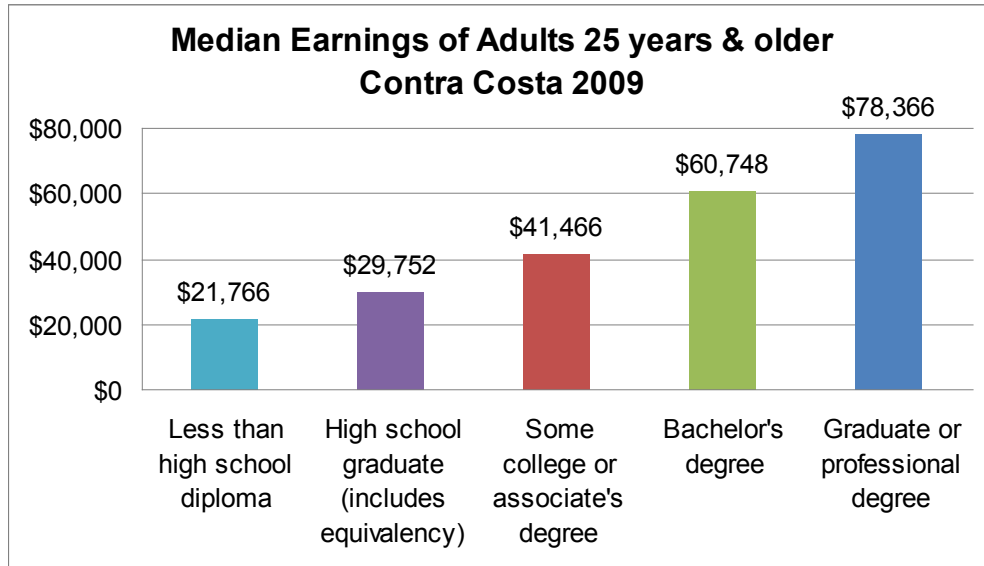


FIGURE 9

Low-education households in Contra Costa did not earn enough to achieve self-sufficiency. The percent of households with inadequate income to achieve self-sufficiency in the county in 2007 varied by educational attainment: less than a high school diploma (61.8%); high school graduates (35.5%); some college (20.0%); and bachelor's degree or higher (8.2%).<sup>5</sup>

*The relationship between education and poverty also existed at a city level.*

Geographic differences in health often reflect underlying differences in income, education and racial or ethnic composition in those regions.<sup>1</sup> From 2006-2008, cities in Contra Costa with a greater percentage of residents who had less than a high school diploma also had a greater percentage of residents with incomes less than 200% of the federal poverty level.

From 2006–2008, six cities in Contra Costa had lower educational attainment and higher poverty than the county overall. San Pablo, Bay Point, Pittsburg, Richmond, Antioch and Concord had a higher percentage of residents who did not achieve a high school diploma and had incomes less than 200% of the federal poverty level compared to the county overall. Five cities had both higher educational attainment and lower poverty than the county overall. Lafayette, Walnut Creek, Pleasant Hill, Martinez and Hercules had a lower percentage of residents with less than a high school diploma and with incomes less than 200% of federal poverty compared to county residents overall. Information about the varied racial composition for each of these cities is available in the American Community Survey table at the beginning of this report.

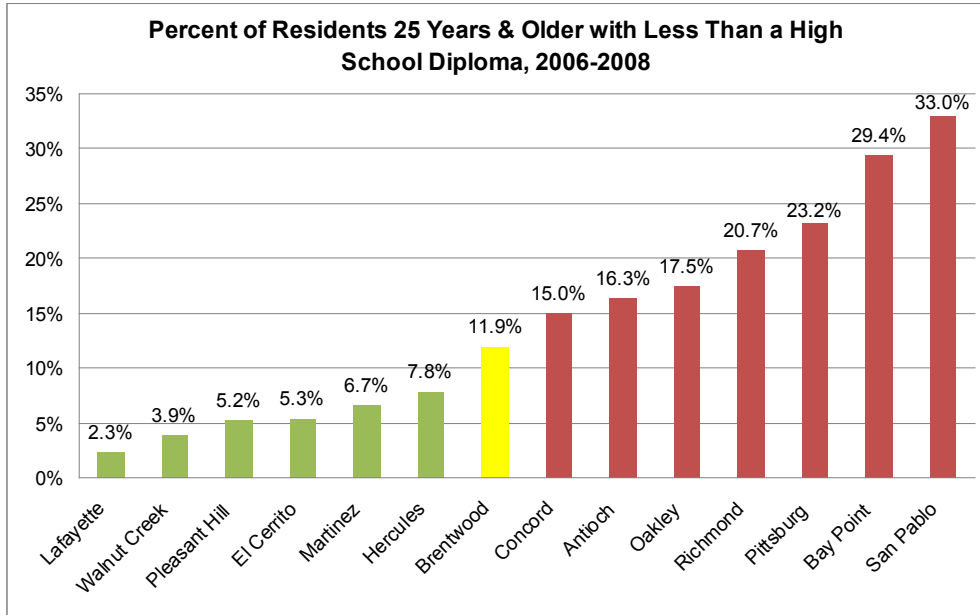


FIGURE 10

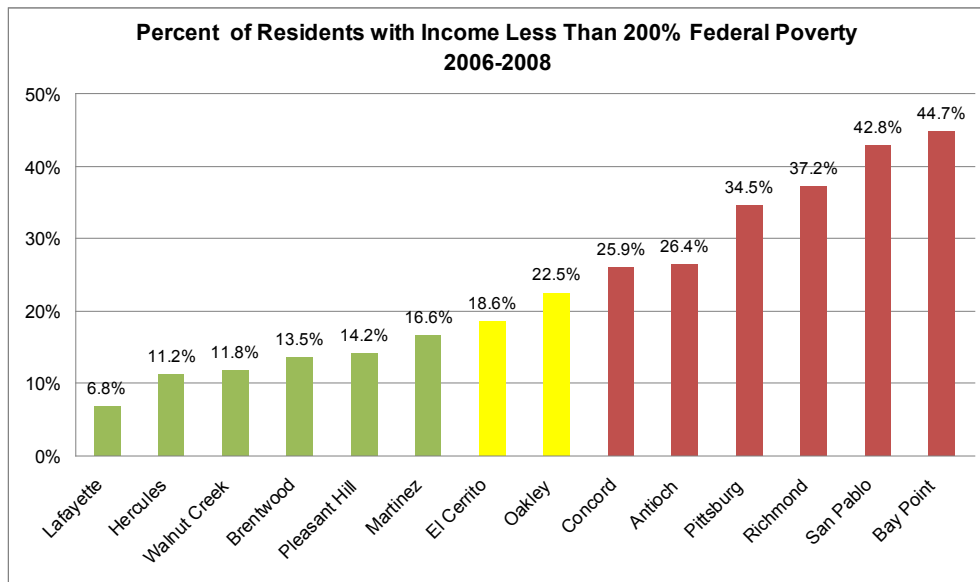


FIGURE 11

*The distribution of income is not equal across all racial/ethnic groups in the county.*

In 2009, the median household income in Contra Costa was \$75,139 and 9.6% of residents were living in poverty. Black/African American and Hispanic/Latino residents of Contra Costa earned less and had higher rates of poverty than white and Asian residents. The income gap was greatest between blacks/African Americans and whites (a difference of \$36,212) followed by Hispanic/Latinos and whites (a

difference of \$34,611). Almost one in five (19.1%) blacks/African Americans and about one in seven Hispanics/Latinos (14.8%) were living in poverty compared to about one in 17 whites (6.0%).

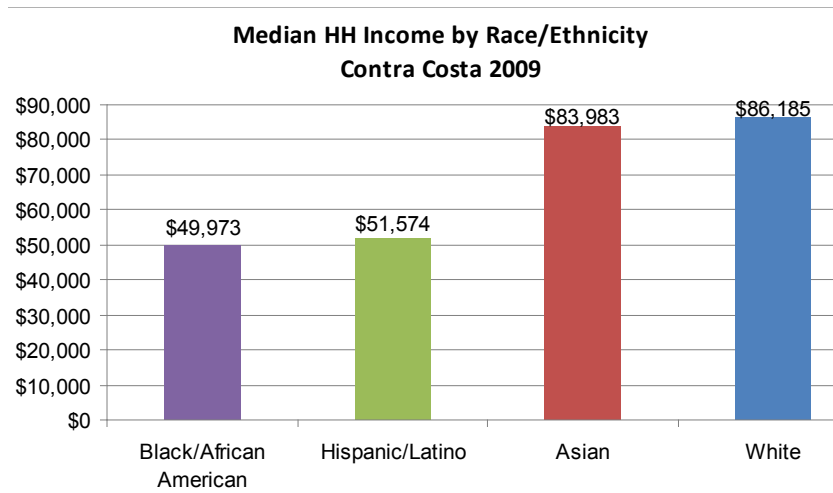


FIGURE 12

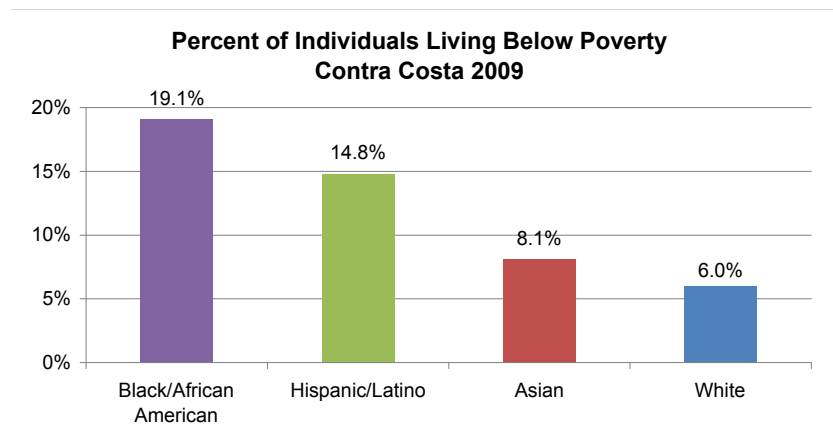


FIGURE 13

In 2007, the percent of households with inadequate income to achieve self-sufficiency in the county also varied by race/ethnicity: Latino (42.0%), black/African American (37.0%), Asian/Pacific Islander (16.5%) and white (12.4%).<sup>5</sup>

*The distribution of education is not equal across all racial/ethnic groups in the county.*

Educational attainment also varied by race/ethnicity. Hispanic and African American residents were generally less educated and white and Asian residents were more educated. In 2009, Hispanics/Latinos had the highest percentage of adults 25 years and older with less than a high school diploma (34.6%). Hispanics/Latinos also had the lowest percentage of bachelor's and more advanced degrees (11.8%)

followed by blacks/African Americans (23.7%). Asians had the highest percentage of bachelor's and more advanced degrees (53.9%) followed by whites (44.5%).

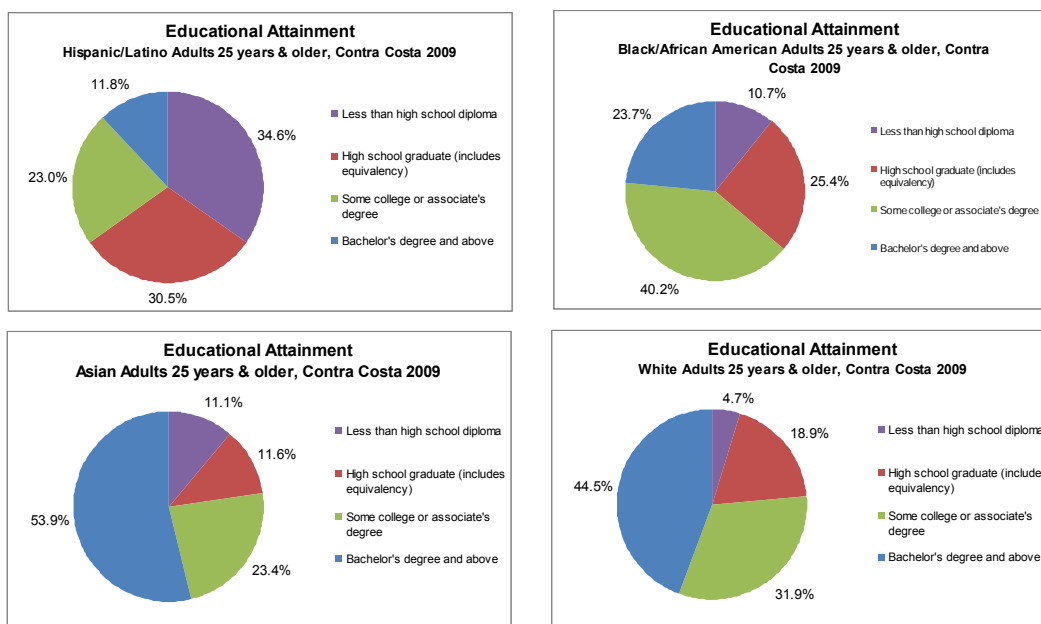


FIGURE 14

## Conclusion

Poverty, education and race/ethnicity play an important role in determining life expectancy and other health outcomes for Contra Costa residents. Each factor explored in this section impacts the others and has its own effect on health. The relationship between race and life expectancy cannot be fully explained by differences in income and education. Clearly, the experience of race and ethnicity over the life course of people in our communities, as well as education and income, has a profound impact on health.

In most of this report, data for key health indicators are presented for the county overall and by gender, race/ethnicity and city. Although these sub-county analyses of the data can be useful for identifying populations that are most impacted by various health issues, they do not identify all of the underlying factors that influence health disparities. We need to develop a better understanding of how income, education, ethnicity and other factors lead to health inequities so that we can work as a community to improve the health of all our residents and to ensure that every child born has an opportunity for a long and healthful life.

## Data Sources: Health Inequities

### TEXT

1. Braverman P, Egerter S. et al (2008) Overcoming Obstacles to Health. Robert Wood Johnson Foundation.
2. Alameda County Public Health Department (2008), Life and Death from Unnatural Causes. Health and Social Inequity in Alameda County. August 2008.
3. Robert Wood Johnson Foundation. (2009) Issue Brief 6: Education and Health, Commission to Build a Healthier America.
4. Adler N, Stewart J, et al. Reaching for a Healthier Life – Facts on Socioeconomic Status and Health in the U.S. The John D. and Catherine T. MacArthur Foundation.
5. Pearce et al. (2009) Overlook and Undercounted 2009: Struggling to Make Ends Meet in California. Diane Pearce and United Way of the Bay Area, December 2009.

### FIGURES

Figures 1,3. Self-reported health status data from the California Health Interview Survey. Retrieved 12/2/10. For self-reported health, respondents were asked: “In general, would you say your health is excellent, very good, good, fair or poor?” For educational attainment, respondents were asked: “What is the highest grade of education you have completed and received credit for?”

Figures 2,4. Census tract demographic data from the 2000 Census. Death data from the Death Address and Death Statistical Master files, 1999-2001, California Department of Public Health.

Figure 5. Death Statistical Master file, 2005-2007, California Department of Public Health.

Figures 6–7. Quintile data from the 2009 American Community Survey 1-Year Estimates, File B19080: Household income quintile upper limits and File B19082: Shares of aggregate household income by quintile, retrieved 12/1/10.

Figure 8. Poverty status by educational attainment data from the 2009 American Community Survey 1-Year Estimates, File C17003: Poverty status in the past 12 months of individuals by educational attainment among the population 25 years and older for whom poverty status is determined. Retrieved 11/6/10.

Figure 9. Median earnings by educational attainment from the 2009 American Community Survey 1-Year Estimates, File B20004: Median earnings in the past 12 months (in 2009 inflation-adjusted dollars) by sex by educational attainment for the population 25 years and older among those 25 years and older with earnings, retrieved 11/3/10.

Figure 10. Educational attainment by city data from the 2006-2008 American Community Survey 3-Year Estimates, File C15002: Sex by educational attainment for the population 25 years and older.

Figure 11. Percent below 200% of federal poverty level by city data from the 2006-2008 American Community Survey 3-Year Estimates, File C17002: Ratio of income to poverty level in the past 12 months among the population for whom poverty status is determined, retrieved 12/1/10.

Figure 12. Median household income by race/ethnicity data from the 2009 American Community Survey 1-Year Estimates, File S0201: Selected population profile in the United States using income in the past 12 months (in 2009 inflation-adjusted dollars). Retrieved 11/16/10.

Figure 13. Poverty by race/ethnicity data from the 2009 American Community Survey 1-Year Estimates, File S0201: Selected population profile in the United States. Retrieved 11/16/10.

Figure 14. Educational attainment by race/ethnicity data from the 2009 American Community Survey 1-Year Estimates, File S0201: Selected population profile in the United States. Retrieved 11/16/10.

#### MAPS

Map 1-3: Census tract level poverty, education and race/ethnicity data from the 2000 Census.

*Note: Throughout this section, data presented for Hispanics/Latinos include Hispanic residents of any race. Data presented for whites, Asians/Pacific Islanders and African Americans include non-Hispanic residents.*